



# Key Issues in Scaling-Up Electricity Access

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## The Challenge of Inclusive Development

- Worldwide, over 2 billion people
  - ◆ Do not have access to electricity
  - ◆ Rely on traditional biomass fuels and use them in inefficient/unsustainable ways
- Most people without modern energy are rural
- “Challenge of inclusion”--reduce poverty, improve quality of life, reduce disparities--key development challenge of our time
- In South Asia and Africa, we are loosing the race

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## The Challenge of Scale and Pace: Ethiopia

- Household access under 5 percent--that too, many in urban areas
- New connections rate for rural households (about 10 million households) is around 5,000/year
- At this rate.....

“We must look at these issues, with a sense of urgency and a sense of scale”

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## The Challenge of Scale and Pace: Bangladesh

- Household access overall about 15 percent--in rural areas about 10 percent
- New connections rate for rural households (about 15 million households) is around 120,000/year
- At this rate....

“We can continue business as usual, focusing on a project here, a project there, all too often behind the poverty curve.”

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## Challenge: Renewable Energy Is Underutilized

- Many small-scale renewable energy technologies are:
  - ◆ cost competitive, particularly with environmental cost considered
  - ◆ near-ready for wide-spread use in developing countries
- Yet, share of renewable energy in energy supplies remains small.

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## Key Issues

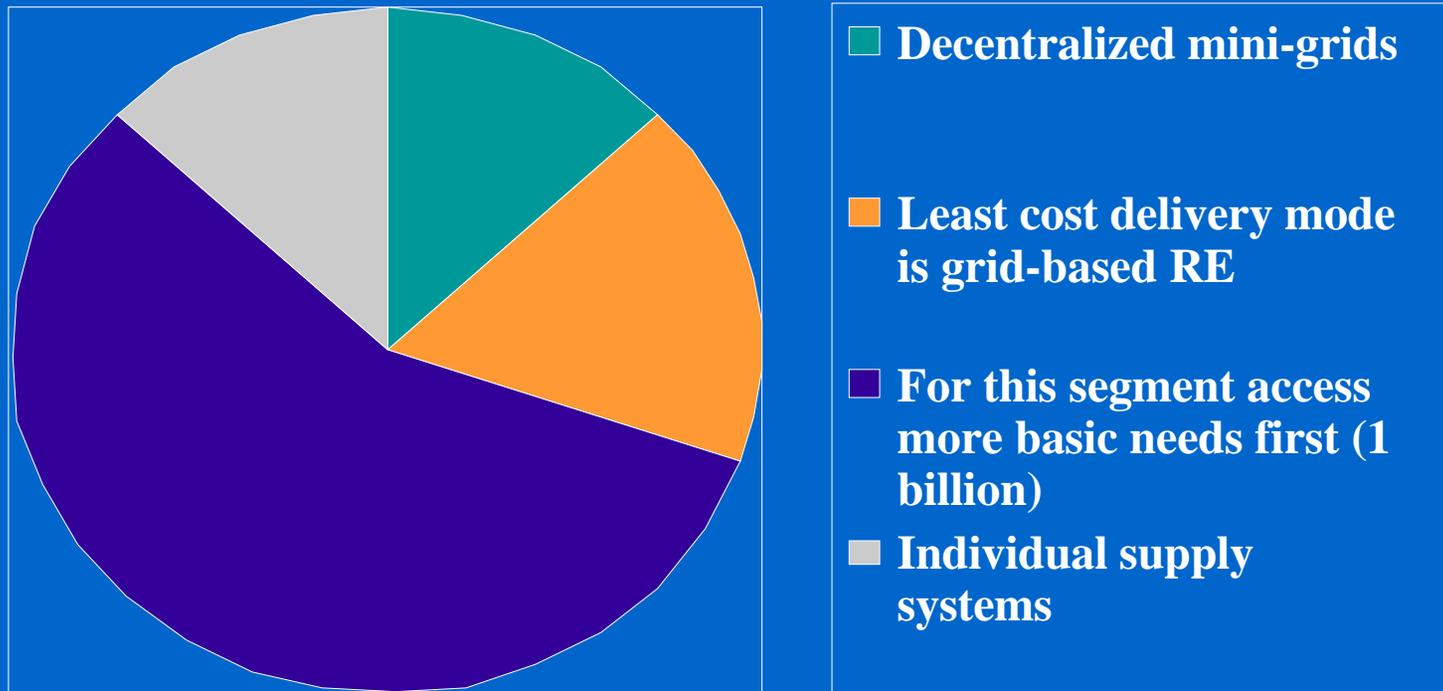
### Starting on the Right Foot--Getting the Problem Definition Right

- Introducing an environmentally friendly technology
  - RET market development
  - Addressing global externalities
  - Supporting inclusive development through scaling-up electricity access and facilitating non-farm income generation
- ★ Implications for strategy are quite different depending on which land whose problem we trying to solve.

## Key Issues

# Multiple Supply Options Necessary to Expand Access

2 billion Unserved Today



- Don't count grid-base RE out
- Diesels will and should continue to have role

## Key Issues

### Private Sector Participation is Essential, Yet...

- Technology specific barriers
  - ◆ lack of technological familiarity
  - ◆ poor quality of resource information
- Energy sector specific barriers
  - ◆ lack of regulatory and enabling environment
  - ◆ misdirected Government policies/programs
  - ◆ market prices of competing fuels are often subsidized and do not reflect externality costs
- Economy-wide barriers
  - ◆ tariffs, duties
  - ◆ poorly functioning local capital markets, financial institutions, legal system

## Key Issues

# Lowering the Barriers to Private Sector

### ○ Policy Changes

- ◆ Provide “public good” resource information
- ◆ Level playing field through tariff, policy and regulatory changes
- ◆ Shift government agencies from market maker/technology distributors to market enablers

## Key Issues

### Lowering the Barriers to Private Sector (continued)

- Lower key costs and risks of private developers, and suppliers of capital
  - ◆ pre-investment costs
  - ◆ incremental transaction costs
  - ◆ Facilitate technical and social intermediation

## Key Issues

### Universal Access or Targeted Access

- Can we afford to go from one extreme today--little or no access--to the other extreme of universal access?
  - ◆ Depends on starting point and political commitment
- In most instances “electricity for all” is not feasible for the foreseeable future on account of the subsidy requirements
- The silver lining and one way out is to recognize that affordability varies substantially across the excluded population

## Key Issues

### **Even When Expanding Access is Economically Viable Financial Viability is Not Assured**

- Within the target market segments it will be necessary to expand access to end-user credit and term-financing, to local service funders by opening low cost and low hassle (efficient) financial intermediation channels
- Promote judicious use of GEF grants to lower first cost of obtaining access
- New financing mechanisms that place a market value on carbon avoided as well as trading mechanisms that offer a premium price of renewables maybe on the way

## Key Issues

### **Facilitating Non-Farm Income to Increase the Benefits Stream is Key**

- Introduction of electricity, even in areas with potential for increased productive uses off-farm, does not necessarily and quickly catalyze such benefits
- Programs aimed at scaling up rural electricity access to households should incorporate provisions to increase the capacity of potential off-takers electricity for productive uses.

## Key Issues

### **The Role of Non-Conventional Stake-holders and Delivery Agents in Expanding Rural Electricity Access**

- Continued reliance on urban-centric contributions will not get the job done in most instances
- We must find ways to attract local rural-centric entrepreneurs and other big stake-holders and intermediaries such as NGOs to help us design and implement our program
  - ◆ Social and technical intermediation are essential
- Upstream capacity building is a key to make this happen
  - ◆ A technical, financial skills, business, management, marketing, community relations

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## Conclusions

“ We have to ask ourselves not just whether this or that project has worked, but the much larger question-What development impact have we catalyzed?”

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## Conclusions (continued)

### Think Fundamentally Radically and With a Long View

#### Shift Mind-Set From

#### To

- Anecdotes      Thinking Big Picture and Strategically
- Demos/Pilots and little “activities”      Mainstreaming for scale up and development impact
- Solving our problems      Solving their problems
- Projects/Transactions      Country, Division Programs; High Selectivity; Establishing a Few Good      Practice Programs for Others to See and Develop Upon
- Government as market makers      Governments as market enablers

## Conclusions (continued)

### Need a Radical Shift in Mind-sets

#### Shift Mind-Set From

- Technology/money dumping
- Technical assistance
- Road Warrior and Crusaders
- Road Warrior and Crusaders

#### To

Develop efficient and sustainable delivery mechanisms and other by elements required for a functional market

Rural partnerships between the various donors agencies and multilateral institutions

More aggressive and upstream capacity building, but coordinated with a big impact on rural access investment program

- a very fertile ground for partnerships between donor agencies, and the World Bank.

Unleashing local armies of entrepreneurs, NGOs, and other local intermediaries

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## Getting a Feel For How Fast Can We Achieve Scale Up For Some Segments of the Excluded Population

### An Example-The Case of SHS Market Penetration

- Overall world market size today: 50+ million households
- Market Scale Today: About 150,000 units per year
- Number of years for First Million: 8-10 years
- Number of years for Ten Million: 30+